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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/158,778	09/23/1998	KIRK TREADAWAY	WNET-00400	4350

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EXAMINER

QURESHI, AFSAR M

ART UNIT	PAPER NUMBER
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2667

DATE MAILED: 06/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/158,778

Applicant(s)

TREADAWAY ET AL.

Examiner

Afsar M Qureshi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 September 1998.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-65 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 51-65 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-17,19,20,22-27,29,31-33,35-38,40,41,44-46,48 and 50 is/are rejected.
- 7) ☒ Claim(s) 3,18,21,28,30,34,39,42,43 and 47-49 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 1998 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2-4,7.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

1. New corrected drawings (7-13, 15, 9-21) are required in this application because these drawings have hand written numerals and entries. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2 recites the limitation "the Ethernet data packets" in lines 1 & 2. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 1,2,4-17,19,20,22-27,29,31-33,35-38,40,41,44-46,48 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cantoni et al. (US 5,050,166) in view of Eastmond et al. (US 5,636,213).

Claims 1, 15,25, 26, 31,32,36,38,45,46,48 Cantoni et al. ('Cantoni' hereinafter) disclose a method for transmitting *variable length* messages in a fixed length frame of equal lengths (see col. 3, lines 34-41 and figure 2) for communication over a wireless link. It comprises a source 42 (*receiver*), segmentation unit 48 for segmenting the message into fixed length slots (*data packet formatting apparatus*), coupled to source, and Fast packet switch 44 (see col. 2, lines 58-67). The distributed nodes i.e., Access Units (figure 3), coupled to the segmentation units 48, transmit the radio frame over the wireless links (see col. 4, lines 10-50). The reassembly machine 50 (see col. 10, lines 10 through col. 11, lines 1-5, also, figures 11 and 12) is used to reconstruct the received data packet and subsequently transmitting the data packet to destination 46 (figure 2) (claim 31).

In regard to performing forward error correction on data from the data packet (claim 36), Cantoni discloses a CRC 30 for error checking (see col. 8, lines 53-59).

Although Cantoni discloses a TYPE field 36 that include codes giving the number of slots separation between two consecutive segments of the message, as in claim 26, (see col. 4, lines 68 through col. 5, lines 1-13), nonetheless, Eastmond et al.

('Eastmond' hereinafter) disclose an absence detector unit 102 (figure 1), used in a wireless communication compatible with 10 BASE-T Ethernet, that determines an absence of the transmitted signal.

It would have been obvious to one of ordinary skill in the art, at the time of invention, to be able to modify the Segmentation unit 48 by incorporating the 'absence detector/determiner' unit (Eastmond) to determine an operation time signal in which the receive signal is absent. Such a determination can be utilized to improve communication in wired and wireless environments and be able to make file-sharing and communications capabilities as user-defined by the same operating system since no protocol or data rate translation would be required.

Claims 2, 24, 29, 35 and 40. Eastmond discloses the system for wireless communication compatible with 10BASE-T Ethernet in which wired and wireless communication is possible without the need of protocol conversion or data rate translation (see col. 2, lines 49-59).

Claims 4, 9, 23, 27 and 37. Eastmond discloses that the data packets are Fast Ethernet data packets (see Abstract).

Claims 5, 6, 16, 22, 33, 41 and 50. The invention, by Cantoni, relates to time multiplexed fixed slots of known lengths (col. 1, lines 7-12, and col. 2, lines 41-45, and see figure 4).

Claims 7, 17, 19 and 30. These limitation, inter-packet gap and 'code representative of the inter-packet gap stored in the data field between the data packets' is already discussed in the rejection of claim 1... above.

Claims 8, 10-13, 20. Cantoni discloses source 42 (figure 2). A skilled artisan, in the pertinent art, would readily appreciate that, within the network community, data is likewise carried over data networks such a LANs and WANs in discrete digital packets,

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wherein, source 42 is functionally considered to be a LAN since it produces messages (col. 4, lines 10-24) for transmission on fast packet switch 44. Access units 4, coupled to source 42 and part of fast packet switch 44, are considered as *packet receiver* (see col. 4, lines 42-50, and figure 3).

Cantoni and Eastmond do not specifically disclose means of connection such as twisted pair wire or fiber optic cable. However, as it is known and old, Fast Ethernet standards, typically referred to as 100BASE-X standards, include interconnecting devices over an ordinary twisted pair telephone cable or fiber optic cable at full duplex, each of the connections provide a media independent interface (IEEE 802.3u). Therefore, Examiner contends that the connections shown in figure 2 (Cantoni) can be of twisted pair wire or fiber optic cable.

Therefore it would have been obvious to one of ordinary skill in the art, to be able to select either twisted pair cable or fiber optic cable in light of standards available at the time of invention.

Claims 14 and 44. As discussed in the rejection of claim 8..., Cantoni discloses two way communications (see col. 4, lines 46-48).

***Allowable Subject Matter***

4. Claims 3,18,21,28,30,34,39,42,43,47 and 49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Claims 51-65 are allowed over the prior art of record. The cited art fails to disclose stripping off the preamble and start-of-frame delimiter, and, formatting the data packet by appending a synch field to the data packet and appending a length field to the packet data as in claim 51 of the instant application.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Kotchey (US 5,978,384) discloses Inter-Packet Gap (IPG) timer software with timing mechanism for introducing IPG between transmitted data packets.

Birdwell et al. (US 6,172,972) disclose a method for transmitting network data over satellite network by encoding network data into format. The packet includes a data block and header information and method of retrieving the data at the receiving end.

Feuerstraeter (US 6,169,729) provides a communication device for communicating 200 Mbps PHY/MAC combinations in full duplex.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Afsar M Qureshi whose telephone number is (703) 308 8542. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (703) 305 4378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
June 09, 2004  
**AFSAR QURESHI**  
**PATENT EXAMINER**